PCN7

ASSESSING INTERFERON-ALPHA MONOTHERAPY IN PATIENTS WITH ADVANCE OR METASTATIC RENAL CELL CARCINOMA

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OBJECTIVES: The objective was to evaluate the clinical efficacy and safety of interferon-α 2a (IFN) in the treatment of advanced/metastatic renal cell carcinoma in treatment-naïve patients. **METHODS:** Studies were retrieved from Embase, Pubmed, Cochrane, and DARE databases using relevant search strategies. Randomized controlled trials, which compared IFN with other pharmacological interventions/best supportive care (BSC), were included according to prespecified inclusion/exclusion criteria. The outcomes of interest were overall survival (OS), progression free survival (PFS), response rate (RR), and adverse events (AEs). Two reviewers independently extracted data from the included studies. Data were analyzed using RevMan (5). **RESULTS:** Of the 736 studies identified, seven studies met the inclusion criteria. In total, 1147 patients were randomized to IFN, and 1150 were randomized to comparator interventions. Two studies reported comparison with interleukin-2 (IL-2), two with BSC and one each with sorafenib, sunitinib, and temsirolimus. Median OS ranged from 9 to 21.8 months with IFN. Progression-free survival ranged from 1.9 to 5.6 months and overall RR ranged from 4.83% to 12.27% with IFN. Sunitinib had significantly better overall RR ($P < 0.001$), PFS ($P < 0.001$), and OS ($P < 0.01$) compared to IFN. Sorafenib and temsirolimus had better overall RR than IFN ($P < 0.01$). Results of meta- analysis demonstrate that IFN has better overall RR than BSC (OR: 2.51 [95% CI: 0.87, 7.27], $P = 0.089$) and similar RR as IL-2 (OR: 1.09 [95% CI: 0.48, 2.45], $P = 0.836$). The AE profile (gastrointestinal, vascular, infectious, and blood disorders) was similar with IFN and comparators. **CONCLUSIONS:** Survival benefit with IFN-α was lower than the newer therapeutic agents. Anti-angiogenic agents targeting through multiple receptor kinases, such as sunitinib and sorafenib have significantly improved response rates and survival. These agents would be preferred for treatment naïve patients with advanced/metastatic renal cancer.

PCN8

CLINICAL AND ECONOMIC BURDEN OF TOXICITIES ASSOCIATED WITH MONOCLONAL ANTIBODIES FOR METASTATIC COLORECTAL CANCER (MCRC)

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OBJECTIVES: As overall survival improves with newer therapies for mCRC, treatment-limiting toxicities and related costs will be important when evaluating treatment decisions. Little is known about toxicity-related cost of currently available monoclonal antibody treatments. This study was designed to identify cetuximab-, bevacizumab-, and panitumumab-related toxicities and estimate direct costs of treating these toxicities. **METHODS:** A comprehensive literature search was performed to identify English language phase II/III studies of monoclonal antibodies for mCRC. The search utilized PubMed, conference abstracts, treatment guidelines, and product labels. Commonly reported grade 3 and 4 toxicities were identified, and outpatient and inpatient costs were estimated for all toxicities. Outpatient costs were estimated by applying 2010 Medicare reimbursement rates to resource use assumptions (assessed based on in-depth clinical interviews). Inpatient costs were estimated using ICD-9 codes and 2007 Medicare payments from the HCUP database; then were converted to 2010 values using the Consumer Price Index for medical care services. **RESULTS:** Clinically significant toxicities associated with bevacizumab include hypertension, arterial thrombosis, hemorrhage, gastrointestinal (GI) perforation, fistula, and wound healing complication; while treatment-related toxicities associated with cetuximab and panitumumab include skin rash, hypomagnesemia, and infusion reactions, although the incidence of these toxicities differ between the two drugs. Cost of toxicities treated in outpatient setting ranged from $185 (hypertension and skin rash) to $585 (wound-healing complications). Inpatient cost per event for GI perforation is the highest at $32,443, followed by fistula $29,062, arterial thrombosis $20,346, wound healing complication $13,240, hemorrhage $12,956, infusion reaction $10,326, and hypertension $8453, while inpatient cost per event for skin rash and hypomagnesemia is among the lowest at $4424 and $6174, respectively. **CONCLUSIONS:** Monoclonal antibodies have different toxicity profiles and the costs associated with managing these toxicities vary greatly.

PCN9

OBSERVATIONAL STUDY OF PATIENTS WITH NON SMALL CELL LUNG CANCER (NSCLC) TREATED BY ERLOTINIB: CLINICAL PRACTICES AND MAIN OUTCOMES IN FRANCE

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OBJECTIVES: Few data are available about the use of erlotinib in real-life in France for patients with non small cell lung cancer (NSCLC) in a selected population. **METHODS:** An epidemiological multicenter observational study was built in 35 french centers. The study was retrospective (2006 to 2008) and a cohort was created with a follow-up period of 1 year. The main objective was to describe practices, use of erlotinib, response, and adverse events. **RESULTS:** A total of 533 patients (333 males, 200 females) have been included. The histological types were as follows: 330 (62.5%) adenocarcinoma, 107 (20.2%) squamous cell carcinoma, 60 (11.3%) large cell carcinoma, 36 (3.8%) undifferentiated carcinoma. In terms of practice, 502 patients had a first line chemotherapy (81% a doublet, 11% three drugs, 8.2% one drug). Among them, 61.2% received a second line of treatment (83.4% one drug, 15.7% two drugs and 0.9% three drugs), 17.6% received a third line (91% one drug). Erlotinib was prescribed a first line treatment (n = 30; 5.6%), second line treatment (n = 190; 35.6%), third line (255; 47.8%), fourth line, and more (n = 50; 9.3%) and as a maintenance therapy (n = 9; 1.7%); the stage at treatment initiation were stage I–II (1.2%), IIIA (3.8%), IIIB (5.3%), and IV (89.7%). For the first line, the median duration of erlotinib treatment was 123 days (d) in second line 98 d, in third line 77 d, in maintenance 127 d. Global response rate was 20% with a maximum of 32% in first line and 33% in maintenance. Grade III adverse events occurred in 11.5% of patients and grade IV in 3.4%. **CONCLUSIONS:** Erlotinib was widely used in France in 2[d] and 3[d] line treatment with a good response rate and tolerance. Adenocarcinoma is the main indication.

PCN10

EXPLORATIVE ANALYSIS ABOUT THE POTENTIAL OF A LARGE GPS LONGITUDINAL DATABASE ON SEARCHING CAUSAL ASSOCIATIONS AMONG PATHOLOGIES

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OBJECTIVES: The main objective of this study was to analyze different approaches and methods to explore potential causal associations among prevalent pathologies. We have focused on diabetes mellitus (DM) and its well-known association with incident neoplasia. **METHODS:** For this retrospective cohort study, data were obtained from CSD LPD, a General Practitioner's longitudinal database. We have evaluated the risk of neoplasia incidence among people with diabetes mellitus compared with those without this pathology, in patients who had no reported history of benign or malign neoplasia at the start of the follow-up on January 2006. For the DM group, patients with at least one diagnosis of DM from January 2005 to December 2005 have been selected, while for the DM-free group, patients without a diagnosis of DM and a date of registration in the GPs office before January 2006 have been selected. Both groups have been followed up for 48 months. **RESULTS:** During the selection period, 45.121 (3.4%) patients with a diagnosis of DM (females: 22.330, males: 22.791) and 1.290.597 (96, 6%) patients without a diagnosis of DM (females: 690.462, males: 600.135) have been selected. During the follow-up 6.648 and 80.880 incident cases of neoplasms have been documented from the DM and DM free groups respectively. The mean follow-up duration was 43 and 45 months for the DM and the DM-free groups respectively. **CONCLUSIONS:** The selected cohort has shown to match quite well with general population in terms of gender and age. The estimated prevalence of diabetes also matches with the one of the general population. Statistical analysis has shown an adjusted (for age and sex) hazard ratio of 1,88 (95% CI 1,83–1,93) suggesting an association between DM and incident neoplasms, evidencing that GPs longitudinal databases could be a valid instrument for evaluating causal association among prevalent pathologies.

PCN11

GEFITINIB COMPARED WITH DOUBLET CHEMOTHERAPY FOR FIRST-LINE TREATMENT OF NON-SMALL-CELL LUNG CANCER (NSCLC): A SYSTEMATIC REVIEW AND ADJUSTED INDIRECT COMPARISON

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OBJECTIVES: Objective response rate (ORR) is an early indicator of successful treatment in patients with NSCLC. This research compared gefitinib with platinum-based doublet chemotherapies for first-line treatment of advanced NSCLC in patients harboring activating epidermal growth factor receptor tyrosine kinase (EGFR-TK) mutations (M+). **METHODS:** Systematic searching of CENTRAL, EMBASE, and MEDLINE for randomized controlled trials (RCTs) comparing ≥2 doublet chemotherapies (carboplatin or cisplatin in combination with either docetaxel, gemcitabine, paclitaxel, pemetrexed, or vinorelbine) for the first-line treatment of advanced NSCLC was completed in May 2009. a meta-analysis was performed on ORR using data from published RCTs of gefitinib versus paclitaxel/carboplatin in EGFR-TK M+ patients. a mixed treatment comparison (MTC) was carried out with doublet chemotherapies in unselected advanced NSCLC patients using paclitaxel/carboplatin as a baseline. Treatment effect was calculated as an odds ratio (OR) with 95% credible interval (95% CrI). a sensitivity analysis was conducted on the inclusion of the gefitinib trials within the MTC. For this analysis, it was assumed that the efficacy of doublet chemotherapy is consistently affected by EGFR-TK mutation status. **RESULTS:** Three RCTs were identified for gefitinib, of which two were comparisons with paclitaxel/carboplatin. Meta-analysis of these two trials gave an estimated ORR favoring gefitinib: OR 4.04, 95% confidence interval: 2.73–5.98. Twenty-nine trials were appropriate for inclusion in the MTC, of which 25 reported ORR. The MTC found no significant difference in ORR among other doublet chemotherapies versus paclitaxel/carboplatin, with the exception of pemetrexed/cisplatin, in patients with predominantly non-squamous tumor cell histology, which was associated with a significantly higher ORR (OR 1.64, 95% CrI: 1.15–2.27). In the sensitivity analysis, ORR was significantly higher with